Scale and Weight Problem

What is the minimum number of weights that can be used on a scale pan to weight any integral number of pounds from one to ten inclusively, if the weights can be placed in either pan?

Things to Consider

- For each weight, there are three things you can do with it:
  - put it on the left pan
  - put it on the right pan
  - not put it on the balance at all

- Weights can be used to make other weights and they can cancel each other out, for example, 2 and 5 can be used to make 7 (have both on the same scale pan) or 3 (have 2 on one scale pan and 5 on the other)

Answers

Number	Scale Pan 1	Scale Pan 2
1	1	0
2	1	3
3	3	0
4	1 + 3	0
5	1 + 3	9
6	3	9
7	1 + 9	3
8	9	1
9	9	0
10	1 + 9	0

Answer

Number	Scale Pan 1	Scale Pan 2
1	1	0
2	1	3
3	3	0
4	1 + 6	3
5	1	6
6	6	0
7	1 + 6	0
8	1	3 + 6
9	3 + 6	0
10	1 + 3 + 6	0